AIR QUALITY PERMIT

Issued To: Allwaste Container Services
3415 Edgewood Drive
Miles City, MT 59301

Permit #2832-06
Modification Request Received: 01/17/01
Additional Information Received: 02/06/01
Department Decision on Modification: 02/23/01
Permit Final: 03/11/01
AFS #017-0005

An air quality permit, with conditions, is granted to Allwaste Container Services (Allwaste), pursuant to Section 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM) 17.8.701, *et seq*., as amended, for the following:

Section I: Permitted Facilities

A. Location

Allwaste's rail car cleaning facility is located in Section 26, Township 8 North, Range 47 East, Custer County, on East Valley Drive in Miles City, Montana. A more complete description of the facility is contained in the permit analysis.

B. Current Permitting Action

On February 6, 2001, the department received a request from Allwaste for an administrative change to permit #2832-05. The requested change involves updating emission calculation methods for demonstrating compliance with Allwaste's synthetic minor (SM) status for hydrogen chloride emissions. The calculation method contained in permit #2832-05 reflects an average of monthly emissions for pressure cars with 1 atmosphere of chlorine, which is a reasonable worst case scenario estimate. However, Allwaste anticipates that many of the railcars containing chlorinated materials would be general purpose cars with lower vapor pressures; thus, a more accurate calculation method is needed. The department worked with Allwaste to develop an appropriate method and change the language in Section II.C.5 and II.C.6 of permit #2832-05 accordingly for the current permit action.

Further, chlorine cars are no longer routed to the flare; rather, they are sent to a caustic scrubber for treatment. The caustic scrubber was previously added to the facility under the de minimis rule (ARM 17.8.705(1)(r)). Chlorine emissions from the caustic scrubber are appropriately recorded and summarized as hazardous air pollutant (HAP) emissions.

In addition, the letter submitted February 6, 2001, requested that the department add a specific permit condition, and associated recordkeeping/reporting requirements, to the permit limiting all HAP emissions to a level less than Title V thresholds for major sources. The department has added the requested permit condition and recordkeeping/reporting requirements in Section II.A.25 and Section II.C.8, respectively, as part of the current permit action.

Finally, in a separate permit change request submitted to the department on January 17, 2001, Allwaste notified the department of an equipment change at the facility. Initially, Allwaste permitted a 12.6-million British Thermal Unit per hour (MMBtu/hr) Johnson boiler as the back-up boiler at the facility. The Johnson boiler has recently been taken out of service, removed from the site, and replaced by a 4.2-MMBtu/hr natural gas and liquid petroleum gas-fired Burnham boiler. The Burnham boiler has been added to the facility under the de minimis provisions of ARM 17.8.705(1)(r). The department will add the Burnham boiler to the equipment list and remove the Johnson boiler and all associated conditions from the permit.

Section II: Limits and Conditions

A. Emission Limits

1. Rail car cleaning shall be limited to the materials contained in Appendix A to this permit, submitted as part of application #2832-02 (ARM 17.8.710).

2. All purging and depressurization vapors from rail cars containing products with a vapor pressure greater than 0.5 psia shall be sent to the flare, except as provided in Section II.A.19 and 20 (ARM 17.8.715).

3. The amount of material processed by Allwaste from the pressurized cars shall not exceed the following (ARM 17.8.710):

a.	Anhydrous Ammonia	14,000,000 scf/yr
b.	1,3-Butadiene	1,168,000 scf/yr
c.	All other (non-Cl containing) permitted materials	37,400,000 scf/yr

4. All rail cars containing residual liquids shall be de-heeled prior to cleaning (ARM 17.8.710).

5. All rail cars requiring vapor control prior to cleaning must have all hatches, openings, or vents sealed or closed until the rail car is connected to degassing or purge systems. Exceptions to this requirement include necessary quick inspections for job cost estimation and openings needed for inlet air during the removal of the heels for general purpose cars (ARM 17.8.715).

6. Allwaste shall install, operate, and maintain a flare capable of meeting the requirements contained in 40 CFR 60.18, including specifications of minimum heating value of the waste gas and maximum tip velocity (ARM 17.8.715).

7. The flare shall have a knock-out drum to remove water or condensed steam before the gases reach the flare stack (ARM 17.8.715).

8. A thermocouple or any other equivalent device shall be installed, operated, and maintained on the flare and connected to the control panel to ensure a flame is present at all times the flare is operating (ARM 17.8.715).

9. Allwaste shall perform and maintain calculations necessary to document the amount of volatile organic compounds (VOC) in the waste gas going to the flare (ARM 17.8.710).

10. Allwaste shall install, operate, and maintain a degassing system to adequately purge the general purpose rail cars (four volume exchanges). This degassing system shall be installed and fully operational by June 1, 1997 (ARM 17.8.710).

11. The flare shall operate with no visible emissions as determined by the method identified in Section II.B.1 of this permit, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours as outlined in 40 CFR 60.18(c)(1) (ARM 17.8.715).

12. Gases to be flared shall be combustible at all times. If necessary to ensure adequate combustion, sufficient sweet natural gas shall be added to make the gases combustible (ARM 17.8.715).

13. Prior to and during degassing or purging operations of the general purpose, non-pressurized rail cars handling the permitted materials, the following operations must be performed

(ARM 17.8.715).

a. The pilot for the flare must be lit.

b. Auxiliary fuel must be available.

c. Begin burning auxiliary fuel at the flare immediately prior to degassing or purging operations.

d. Burn auxiliary fuel after completion of degassing or purging operations until the line is clear of waste gas (i.e., after displacing a minimum of four vapor space volumes).

14. All residual hazardous or RCRA defined characteristic material or heels (ARM 17.54) shall be stored in closed containers prior to shipment off site, except when necessary to open the container to add material. Roll-off containers may be used for storage of non-hazardous materials (ARM 17.8.715).

15. According to CERCLA requirements, Allwaste shall clean up any spills of VOC or inorganic compounds as expeditiously as possible (ARM 17.8.710).

16. VOC emissions from the flare shall not exceed 12.70 tons/year contributed from pressurized rail cars and 3.88 tons/year contributed from non-pressurized rail cars. Ammonia emissions from the flare shall not exceed 25.2 tons/year. These emissions shall be calculated using a 99.7% flare destruction efficiency for VOC, a 92% destruction efficiency for ammonia, and other procedures outlined in Section II.C.1 of this permit (ARM 17.8.715).

17. Allwaste shall not process chlorine or chlorine containing chemicals in an amount such that emissions of HCL from the flare exceed 9.5 tons during any rolling 12-month period (ARM 17.8.710).

18. Allwaste shall not send any material containing 2 parts or more per million of Polychlorinated Biphenyl (PCB) to the flare (ARM 17.8.710).

19. Allwaste is authorized to burn liquid petroleum gas (LPG) and sweet natural gas in both boilers. Also, the Superior boiler may burn 50,000 gal/yr of diesel (ARM 17.8.710).

20. Allwaste is authorized to vent emissions from those general purpose cars with no serviceable vent or connections by which the car can be connected to the flaring system, provided the VOC emissions do not exceed 14.5 tons/yr (ARM 17.8.715).

21. Allwaste shall only operate one boiler at a time (ARM 17.8.710).

22. Allwaste shall not burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions in the boilers (ARM 17.8.322).

23. Allwaste shall install, operate, and maintain a 550-gallon caustic scrubber to control HCl emissions while degassing chlorine pressure cars. The scrubber shall be utilized for all chlorine pressure cars cleaned at the facility (ARM 17.8.710).

24. Allwaste shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements of 40 CFR Part 60, Subpart Dc, for the 1994 Superior 25-MMBtu/hr boiler (ARM 17.8.340).

25. Allwaste shall not process railcars such that potential emissions of any single HAP, which has

been listed pursuant to Section 7412(b) of the Federal Clean Air Act (FCAA), exceeds 10 tons per year or 25 tons per year or more of any combination of such HAP's (ARM 17.8.710).

B. Testing Requirements

1. A visible emissions observation shall be conducted on the flare in accordance with 40 CFR 60.18(f) and compliance demonstrated with the requirement in section II.A.11 by December 31, 1997, and every 4 years thereafter or according to another testing/monitoring schedule approved by the department (ARM 17.8.710 and ARM 17.8.105).

2. All tests shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

3. The department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. Allwaste shall maintain the following information on site (ARM 17.8.710).

a. For each rail car cleaned:

i. Name of each chemical contained in a rail car
ii. Molecular weight (lb/lbmole) of each chemical routed to the flare
iii. In-bound pressure for pressurized rail cars (psig)
iv. Method of cleaning
v. Calculated mass rate (lb/car) of VOC and ammonia vapors purged to the flare
vi. Volume of rail car (for GP rail cars purged to the flare) and volume of natural gas purge used
vii. Time and date of cleaning
viii. Running total of VOC emissions (tons) from the flare for pressurized and non-pressurized rail cars, year to date
ix. Running total of VOC emissions (tons) from venting GP railcars with no serviceable vent, year to date
x. Running total of ammonia emissions (tons) from the flare, year to date

b. For all spills of VOC or inorganic compounds, Allwaste shall keep records as required by CERCLA.

2. Allwaste shall supply the department with annual production information for all emission points, as required by the department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in Section I of this permit.

Production information shall be gathered on a calendar-year basis and submitted to the department by the date required in the emission inventory request. Information shall be in the units required by the department.

In addition, Allwaste shall submit the following information annually to the department by March 1 of each year. This information is required for the annual emission inventory, as well as to verify compliance with permit conditions (ARM 17.8.505).

a. Amount of VOC and ammonia vapors routed to the flare (tpy);
b. Amount and types of material processed from pressurized rail cars (scf/yr);
c. Total VOC emissions from the flare contributed from pressurized and non-pressurized rail cars;
d. Total VOC emissions vented from the GP cars with no serviceable vents;

e. Total HCl emissions;
f. Total ammonia from the flare;
g. Amount of natural gas consumed in the flare;
h. Amount of natural gas consumed in the boilers;
i. Amount of liquid petroleum gas (LPG) consumed in the boilers;
j. Amount of diesel consumed in the Superior boiler; and
k. The number of hours each boiler operated.

3. Allwaste shall notify the department of any construction or improvement project conducted pursuant to ARM 17.8.701(1)(r) that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.705(1)(r)(iv) (ARM 17.8.705).

4. The records compiled in accordance with this permit must be maintained by Allwaste as a permanent business record for at least 5 years following the date of the measurement, must be available at the facility for inspection by the department, and must be submitted to the department upon request (ARM 17.8.710).

5. Allwaste shall maintain detailed records of all cars processed containing chlorine or chlorine-containing chemicals. The records shall identify each car cleaned, the chemical handled by the car, and the initials of the documenting personnel (ARM 17.8.710).

6. Allwaste shall document all HCl emissions resulting from the processing of chlorine and chlorine-containing chemicals. Allwaste shall record emission calculations for each car cleaned and have the ability to summarize emissions for any rolling 12-month time period.

   Calculations for these rolling 12-month time periods shall be available by the 25th of each month for the previous 12-month time period. These emission calculations shall verify compliance with the limitation in Section II.A.17 and shall be consistent with the emission estimation procedures that were developed for the company's 1999 annual emission inventory. A written report of the compliance verification shall be submitted along with the annual emissions inventory (ARM 17.8.710).

7. Allwaste shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204 (3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted with the annual emission inventory information.

8. Allwaste shall document all HAP emissions resulting from the cleaning of railcars at the site. Allwaste shall record emission calculations for each car cleaned and have the ability to summarize emissions for any rolling 12-month time period.

   Calculations for these rolling 12-month time periods shall be available by the 25th of each month for the previous 12-month time period. These emission calculations shall verify compliance with the limitation in Section II.A.25 and shall be consistent with the emission estimation procedures that were developed for the company's 1999 annual emission inventory. A written report of the compliance verification shall be submitted along with the annual emissions inventory (ARM 17.8.710).

Section III: General Conditions

A. Inspection - The recipient shall allow the department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver - The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if the recipient fails to appeal as indicated below.

C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving the permittee of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.701, *et seq*. (ARM 17.8.717).

D. Enforcement - Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401 *et seq*., MCA.

E. Appeals - Any person or persons jointly or severally adversely affected by the department's decision may request, within 15 days after the department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The department's decision on the application is not final unless 15 days have elapsed and there is no request for a hearing under this section. The filing of a request for a hearing postpones the effective date of the department's decision until the conclusion of the hearing and issuance of a final decision by the Board.

F. Permit Inspection - As required by ARM 17.8.716, Inspection of Permit, a copy of the air quality permit must be made available for inspection by department personnel at the location of the permitted source.

G. Construction Commencement - Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked.

H. Permit Fees - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay by the permittee of an annual operation fee may be grounds for revocation of this permit, as required by that Section and rules adopted thereunder by the Board.

PERMIT ANALYSIS
Allwaste Container Services
Permit Number 2832-06

I. Introduction/Process Description

A. Permit History

In 1993, Allwaste Container Services purchased the rail car cleaning facility, located at 1200 Stevelle Road in Miles City, from Transcisco Rail Services. Allwaste operated the facility at Stevelle Road, using the existing equipment, for a number of months. Allwaste has since constructed a new facility, located on East Valley Drive near Miles City, to replace the original facility. The new Allwaste facility (located on East Valley Drive) contains all new equipment with the exception of a 12.6-MMBtu/hr boiler, which was moved from the original facility. On January 6, 1996, **permit #2832-00** was issued to Allwaste for the new facility.

On May 20, 1996, Allwaste applied for **permit #2832-01** requesting an extension of time for the installation of the flare fuel flow meter required by permit #2832-00. Allwaste was trying to develop an even safer method of purging the general purpose cars and this extension allowed this development to proceed without resulting in a situation of non-compliance with permit conditions. The flare fuel flow meter was then required to be installed by December 1, 1996. If it was not installed by this date, Allwaste was not allowed to clean general purpose rail cars containing chemicals listed in Table I of permit #2832-00.

In addition, as a result of this extension, the required initial demonstration of compliance for visible emissions was required to be completed within 180 days of issuance of permit #2832-01. This permitting action did not result in an increase in emissions. Permit #2832-01 was issued to Allwaste on July 4, 1996.

On August 19, 1996, Allwaste submitted an application for **permit #2832-02** requesting to expand the list of chemicals Allwaste is allowed to process, to increase the annual amount of the material processed, and to use approximately 50,000 gal/yr of diesel fuel in the Superior natural gas-fired boiler. This permitting action would result in a potential increase in emissions from the flare of 4.64 tons/yr of NO_x, 25.6 tons/yr of CO, and 6.96 tons/yr of VOCs. The change of the amount of emissions from firing diesel in the boiler would be minimal. Permit #2832-02 was issued to Allwaste on December 26, 1996.

On February 20, 1997, Allwaste submitted a request to modify permit #2832-02 to improve some of the wording contained in Section II.A.10 of the permit and to extend the deadline for the installation of the general purpose rail car degassing system. This extension is necessary because of the hazards and difficulties of working through the winter. The degassing system needed to be installed and fully operational by June 1, 1997. This modification would not result in an increase in any emissions from the facility. **Permit #2832-03** was issued to Allwaste on April 11, 1997.

Allwaste submitted a request to alter permit #2832-03 to exempt certain general purpose (GP) railcars from the requirement to control emissions with the flaring system. Because some of the GP railcars are not equipped for proper vapor degassing and flaring, venting these cars to the flaring system could create significant safety and liability issues for Allwaste. Through this permitting action, Allwaste was no longer required to route to the flaring system those GP railcars with no serviceable vents or connections for the flaring system, as long as the VOC emissions do not exceed 14.5 tons/year. A proposal such as this would normally be exempt from permitting requirements, as described in ARM 17.8.705(1)(r); however, this action required the department to change a permit condition and add an emission limitation; therefore, a permit alteration was necessary.

In addition, on June 11, 1998, Allwaste submitted a request to include another project in this permitting action. Allwaste proposed to install a small vacuum system, two large pressure cars for intermediate storage, and related piping and electrical systems to transfer LPG and anhydrous ammonia (AA) from near empty pressure cars to a new intermediate storage area. The LPG and AA can then be accumulated for resale or used on site as fuel. This resulted in only minor fugitive emissions from flanges and valves. This project falls under the permitting exclusion contained in ARM 17.8.705(1)(r); however, it is described here to avoid future confusion. **Permit #2832-04** replaced permit #2832-03.

On October 14, 1999, Allwaste submitted a request to remove reference to the nuisance odor rule (ARM 17.8.315) from permit #2832-04. Allwaste must still comply with the rule; however, removal of ARM 17.8.315 from the permit eliminated federal enforceability while maintaining state authority for the rule. Further, a 550-gallon caustic scrubber to control HCl emissions when degassing chlorine pressure cars was added to the equipment list. Addition of the caustic scrubber will result in potential emissions of less than 15 ton/yr and was accomplished under the de minimis rule (ARM 17.8.705(1)(r)).

In addition, on June 16, 2000, Allwaste submitted to the department a request to incorporate federally enforceable permit limits bringing facility potential emissions to a level below Title V operating permit thresholds. Allwaste was previously subject to the Title V permitting program because potential HCl emissions, a hazardous air pollutant (HAP), exceeded 10 tons/yr. By accepting the process limit contained in Section II.A.17, Allwaste is considered a synthetic minor source and is no longer subject to the Title V operating permit program. Permit **#2832-05** replaced permit #2832-04.

B. Current Permitting Action

On February 6, 2001, the department received a request from Allwaste for an administrative change to permit #2832-05. The requested change involves updating emission calculation methods for demonstrating compliance with Allwaste's synthetic minor (SM) status for hydrogen chloride emissions. The calculation method contained in permit #2832-05 reflects an average of monthly emissions for pressure cars with 1 atmosphere of chlorine, which is a reasonable worst case scenario estimate. However, Allwaste anticipates that many of the railcars containing chlorinated materials would be general purpose cars with lower vapor pressures; thus, a more accurate calculation method is needed. The department worked with Allwaste to develop an appropriate method and change the language in Section II.C.5 and II.C.6 accordingly for the current permit action.

Further, chlorine cars are no longer routed to the flare, rather, they are sent to a caustic scrubber for treatment. The caustic scrubber was previously added to the facility under the de minimis rule (ARM 17.8.705(1)(r)). Chlorine emissions from the caustic scrubber are appropriately recorded and summarized as hazardous air pollutant (HAP) emissions.

In addition, the letter submitted February 6, 2001, requested that the department add a specific permit condition, and associated recordkeeping/reporting requirements, to the permit limiting all HAP emissions to a level less than Title V thresholds for major sources. The department has added the requested permit condition and recordkeeping/reporting requirements in Section II.A.25 and Section II.C.8, respectively, as part of the current permit action.

Finally, in a separate permit change request submitted to the department on January 17, 2001, Allwaste notified the department of an equipment change at the facility. Initially, Allwaste permitted a 12.6-MMBtu/hr Johnson boiler as the back-up boiler at the facility. The Johnson boiler has recently been taken out of service, removed from the site, and replaced by a 4.2-MMBtu/hr natural gas and liquid petroleum gas-fired Burnham boiler. The Burnham boiler has been added to the facility under the de minimis provisions of ARM 17.8.705(1)(r). The department will add the Burnham boiler to the equipment list and remove the Johnson boiler and all associated conditions from the permit.

C. Process Description

The permitted equipment at the Allwaste facility consists of the following emission sources:

1. Elevated Flare
2. One 4.2-MMBtu/hr natural gas/liquid petroleum gas-fired boiler
3. One 1994 Superior 25-MMBtu/hr natural gas and diesel-fired boiler
4. Degassing lines, purging lines, a cleaning rack, a wash-water treatment area, and a less-than-90-day accumulation area for residual hazardous waste
5. A vacuum system and two large pressure cars for the collection and storage of LPG and AA
6. A 550-gallon caustic scrubber to control HCl emissions when de-gassing chlorine pressure cars

The flare was constructed in 1993 and the facility became completely operational on January 2, 1995.

At the Allwaste facility, rail cars are brought in for cleaning. Allwaste cleans pressurized and non-pressurized general purpose cars. The lists of chemicals Allwaste is authorized to handle are included in Appendix A to this permit, which was established in air quality permit application #2832-02. Allwaste connects all pressurized cars to the flare to vent the gases remaining in the car. For chemicals with high vapor pressure, Allwaste connects the identified non-pressurized rail cars to a degassing or purging system to route the emissions to the flare. The flare provides approximately 99.7% control of the VOCs sent to the flare. Steam, nitrogen, or natural gas is used to sweep the rail cars.

In addition to flaring chemical cars, in 1999 Allwaste installed a 550-gallon caustic scrubber for the cleaning of chlorine pressure cars. Since chlorine cars are routed to the caustic scrubber rather than the flare, cleaning of these cars no longer results in HCl emissions. Emissions from the chlorine cars serviced by the scrubber are in the form of chlorine. Chlorine emissions from the scrubber are recorded and summarized as HAP emissions.

Allwaste has also installed two boilers to provide steam for cleaning. Allwaste will only operate one boiler and the other will be used as backup. Allwaste has the ability to burn diesel fuel or LPG gases from rail cars being cleaned in the boilers. This allows Allwaste to use the gases instead of sending them to the flare.

Prior to cleaning low-pressure general purpose cars, the liquid heels are removed and the material is placed in containers. All hazardous wastes must be managed in accordance with applicable hazardous waste regulations promulgated under the authority of the Montana Hazardous Waste and Underground Storage Tank Act. All liquid and solid wastes are shipped off site for disposal.

Because Allwaste's flare is defined as an incinerator under MCA 75-2-215, a determination that the emissions from the flare will constitute a negligible risk to public health is required prior to the issuance of a permit to the facility. The model performed by Allwaste for the hazardous air pollutants from the flare demonstrated negligible risk at the limitations included in the permit.

The facility will also emit other hazardous pollutants as fugitive emissions from general purpose rail cars containing chemicals with vapor pressures below 0.5 psia. These will not be controlled due to the low volatility of the gases and were not included in the risk assessment because they are not combusted in the flare.

Allwaste is required to track the emissions from the flare on a regular basis. This will allow the department to determine compliance with permit conditions without requiring expensive testing and monitoring. The department has incorporated the operational reporting requirements into the permit that are necessary for demonstrating compliance with the permit conditions.

D. Additional information, such as applicable rules and regulations, BACT/RACT determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the department. Upon request, the department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 - General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the department, provide the facilities and necessary equipment, including instruments and sensing devices, and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the department. The department has determined for the current permit action that testing every 4 years is necessary.

3. ARM 17.8.106 Source Testing Protocol. Allwaste shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual. A copy of the manual is available from the department upon request.

4. ARM 17.8.110 Malfunctions. (1) A malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment, or a process when it affects emissions, to operate in a normal manner. A failure caused entirely or in part by poor maintenance, careless operation, poor design, or any other preventable equipment breakdown is not a malfunction. (2) The department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation, or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

B. ARM 17.8, Subchapter 2 - Ambient Air Quality, including, but not limited to:

The following ambient air quality standards or requirements may apply, including, but not limited to:

ARM 17.8.213 Ambient Air Quality Standards for Ozone. Allwaste must comply with the applicable ambient air quality standards. The current permit action is considered an administrative permit modification and will not adversely affect any applicable ambient air quality standard.

C. ARM 17.8, Subchapter 3 - Emission Standards, including, but not limited to:

1. ARM 17.8.308 Particulate Matter, Airborne. This rule requires an opacity limitation of 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter.

2. ARM 17.8.316 Incinerators. This rule requires an opacity limit and particulate matter limit. The opacity limit is superceded by a more stringent BACT requirement of no visible

emissions.

3. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule limits the sulfur content of fuels burned. This rule applies to the boilers.

4. ARM 17.8.340 Standards of Performance for New Stationary Sources (NSPS). 40 CFR Part 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units does apply to the 1994 Superior 25-MMBtu/hr boiler because it was manufactured after June 9, 1989, and has a heat input capacity greater than 10 MMBtu/hr.

D. ARM 17.8, Subchapter 5 - Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. Allwaste shall submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the department. The current permit action is an administrative permit action and does not require an application fee.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

   The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that pro-rate the required fee amount.

E. ARM 17.8, Subchapter 7 - Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.704 General Procedures for Air Quality Preconstruction Permitting. An air quality preconstruction permit shall contain requirements and conditions applicable to both construction and subsequent use.

2. ARM 17.8.705 When Permit Required--Exclusions. This rule requires a facility to obtain an air quality permit or permit alteration if they construct, alter, or use an air contaminant source that has the potential to emit more than 25 tons per year of any pollutant. Allwaste has the potential to emit more than 25 tons per year of VOC; therefore, a permit is required.

3. ARM 17.8.706 New or Altered Sources and Stacks--Permit Application requirements. This rule requires that an application for an air quality permit be submitted for a new or altered source or stack. The current permit application is an administrative permit action and does not require an application.

4. ARM 17.8.710 Conditions for Issuance of Permit. This rule requires that the source demonstrate compliance with applicable rules and standards before a permit can be issued. Also a permit may be issued with such conditions as are necessary to assure compliance with all applicable rules and standards. The source has demonstrated compliance with applicable rules and standards as required for permit issuance.

5. ARM 17.8.715 Emission Control Requirements. Allwaste is required to install on the new or altered source the maximum air pollution control capability which is technically practicable and economically feasible. The current permit action is a permit modification

and does not require a BACT analysis.

6. ARM 17.8.716 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the department at the location of the source.

7. ARM 17.8.717 Compliance with Other Statutes and Rules. This rule requires the permit holder to comply with all other applicable federal and Montana statutes, rules and standards.

8. ARM 17.8.720 Public Review of Permit Applications. This rule requires that Allwaste notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application of its application for permit. The current permit action is an administrative permit action and does not require public notice.

9. ARM 17.8.731 Duration of Permit. An air quality permit shall be valid until revoked or modified as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

10. ARM 17.8.733 Modification of Permit. An air quality permit may be modified for changes in any applicable rules and standards adopted by the Board or changed conditions of operation at a source or stack that do not result in an increase in emissions because of the changed conditions of operation. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.

F. ARM 17.8, Subchapter 8 - Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819-17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the Federal Clean Air Act (FCAA) that it would emit, except as this subchapter would otherwise allow.

   This facility is not a major stationary source because it is not a listed source and does not have the potential to emit more than 250 tons per year (not including fugitive emissions) or more of any air pollutant.

G. ARM 17.8, Subchapter 12 - Operating Permit Program, including, but not limited to:

ARM 17.8.1204 Air Quality Operating Permit Program Applicability. Previous to the current permit action, Allwaste was subject to the Title V Operating Permit Program because the facility had the potential to emit 170 tons/yr of HCl. After issuance of the facility preview Title V Operating Permit, Allwaste decided that it was in the best interest of the company to synthetic minor out of Title V by accepting a federally enforceable limit on HCl emissions. Section II.A.17 of this permit limits HCl emissions to 9.5 tons/year.

H. MCA 75-2-215 Solid or hazardous waste incineration - additional permit requirements, including, but not limited to the following requirements:

The department may not issue a permit to a facility until: (d) the department has reached a determination that the projected emissions and ambient concentrations will constitute a negligible risk to the public health, safety, and welfare and to the environment.

The department has reviewed risk assessments during previous permitting actions for this facility. A risk assessment is not required for this administrative permit action because Allwaste is not

proposing to increase the quantity or kind of material to be incinerated.

III. Emission Inventory

The following calculations, submitted by Allwaste as part of permit request for permit #2832-05, represent scenarios demonstrating compliance with the permit limit of 9.5 tons/HCl year.

A. 20 cars/yr * 24,000 gal/car * 1 scf/7.48 gal * 3 moles HCl/1 mole Methyl Chloroform * 36.5 lb HCl/379 scf * 0.0005 ton/lb = 9.27 ton/year

B. 60 cars/yr * 24,000 gal/car * 1 scf/7.48 gal * 1 moles HCl/1 mole Methyl Chloride* 36.5 lb HCl/379 scf * 0.0005 ton/lb = 9.27 ton/year

- Additional information on emission calculations is contained in permit application #2832-02.

IV. Best Available Control Technology Analysis

The current permit action is an administrative permit action and does not require a BACT analysis.

V. Existing Air Quality and Impacts

The current permit action is an administrative permit action, which will not result in increased potential emissions. Therefore, the department has determined that no adverse air quality impacts will result as a consequence of the current permit action.

VI. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the department has conducted a private property taking and damaging assessment and has determined there are no taking or damaging implications.

VII. Environmental Assessment

The current permit action is an administrative permit action and does not require an environmental assessment.

Permit Analysis Prepared By: M. Eric Merchant, MPH
Date: February 8, 2001

App. A MATERIALS LIST

The attached materials list originated in the Allwaste application for pre-construction permit #2832-02. Allwaste is restricted to the processing of the materials included in the attached materials list only.

LIST OF ALL MATERIALS

MATERIAL	TYPE**	TO FLARE	VAPOR PRESSURE @ 90^{O}F (psia)	@ 50^{O}F (psia)	MOLECULAR WEIGHT (lb/lb-mol)	HAP ?	IN RISK ASSESS MENT
Acetic Acid	GP Railcar	No	0.449	0.1	60.05	No	No
Acetone	GP Railcar	Yes***	6.03	2.25	58.08	No	No
Acrylate	GP Railcar	No	0.13	0.1	72.06	No	No
Acrylic Acid	GP Railcar	No	0.13	0.1	72.06	Yes	No
Acrylic Emulsion	GP Railcar	No	<0.05	<0.05		No	No
Acrylic Emulsion polymer			<0.05	<0.05		No	No
Acrylic, latex and other common coatings	GP Railcar	No	<0.05	<0.05		No	No
Adhesive	GP Railcar	No	<0.05	<0.05		No	No
Adipic Acid	GP Railcar	No	<0.05	<0.05	146.14	No	No
Air Oil	GP Railcar	No	<0.05	<0.05		No	No
Alfonic (ethyoxylate alcohols)	GP Railcar	No	0.164	0.0352	90.12	No	No
Alkalate	GP Railcar	No	<0.05	<0.05		No	No
All food products	GP Railcar	No	<0.05	<0.05		No	No
All materials, including mixtures containing up to 90% of the pre-approved list							
All materials, including mixtures with a vapor pressure <0.05 psia	GP Railcar	No	<0.05	<0.05		No	No
Allyl alcohol	GP Railcar	Yes***	1.047	0.647	58.08	No	No
Alum	GP Railcar	No	<0.05	<0.05		No	No
Alumina	GP Railcar	No	<0.05	<0.05	101.96	No	No
Ammonia Urea Nitrate	GP Railcar	No	<0.05	<0.05		No	No
Ammonium Biosulfate	GP Railcar	No	<0.05	<0.05		No	No
Ammonium Bisulfite	GP Railcar	No	<0.05	<0.05		No	No
Ammonium Hydrogen Sulfite	GP Railcar	No	<0.05	<0.05		No	No
Ammonium Nitrate	GP Railcar	No	<0.05	<0.05		No	No
Ammonium Phosphate	GP Railcar	No	<0.05	<0.05		No	No
Ammonium Polysulfide	GP Railcar	No	<0.05	<0.05		No	No
Ammonium Sulfate	GP Railcar	No	<0.05	<0.05		No	No
Ammonium Sulfide	GP Railcar	No	<0.05	<0.05		No	No
Ammonium Sulfite	GP Railcar	No	<0.05	<0.05		No	No
Ammonium Thiosulfate	GP Railcar	No	<0.05	<0.05		No	No
Amonium Thiosulfide	GP Railcar	No	<0.05	<0.05		No	No
Anhydrous Ammonia	Pressure Railcar	Yes	212.22	73.154	17.03	No	No
Aniline	GP Railcar	No	<0.05	<0.05	93.13	Yes	No
Aqueous Bisulphites	GP Railcar	No	<0.05	<0.05		No	No
Aromatic Concentrate	GP Railcar	Yes***	7.5*	1*	100*	No	No
Aromatic Naphtha	GP Railcar	Yes***	2.54	0.88	78.114	No	No
Aromatic Petroleum	GP Railcar	Yes***	2.54	0.88	78.114	No	No

MATERIAL	TYPE**	TO FLARE	VAPOR PRESSURE @ 90^{O}F (psia)	@ 50^{O}F (psia)	MOLECULAR WEIGHT (lb/lb-mol)	HAP ?	IN RISK ASSESS MENT
Arsenic (waste arsenic) as solids	GP Railcar	No	<0.05	<0.05	74.92	Yes	No
Asphalt	GP Railcar	No	<0.05	<0.05		No	No
Asphalt Anti-stripping compound	GP Railcar	No	<0.05	<0.05		No	No
Asphalt core coating compound	GP Railcar	No	<0.05	<0.05		No	No
Benzene	GP Railcar	Yes	2.54	0.88	78.114	Yes	Yes
Benzyl Acetate	GP Railcar	No	<0.05	<0.05	150.18	No	No
Betaline Liquid (feed supplement)	GP Railcar	No	<0.05	<0.05		No	No
Biphenyl	GP Railcar	No	<0.05	<0.05	154.21	Yes	No
Black Oil	GP Railcar	No	<0.05	<0.05		No	No
Butadiene	Pressure Railcar	No	50.6	25	54.09	Yes	Yes
Butane	Pressure Railcar	Yes	51.67	17.72	58.12	No	No
Butenediol	GP Railcar	Yes	<0.05	<0.05	88.106	No	No
Butyl Acetate	GP Railcar	No	0.337	0.2*	116.16	No	No
Butyl Acrylate	GP Railcar	Yes***	8.3	5*	128.17	No	No
Butyl Alcohol (Butanol)	GP Railcar	No	0.222	0.0436	74.123	No	No
Butyl Phenol	GP Railcar	No	<0.05	<0.05	150.22	No	No
Butylene	Pressure Railcar	Yes	62.3	21.9	56.107	No	No
Butylene Glycol	GP Railcar	No	<0.05	<0.05	76.1	No	No
Butyraldehyde	GP Railcar	Yes***	2.987	1.026	72.1	No	No
Calcium Bisulfite	GP Railcar	No	<0.05	<0.05		No	No
Calcium Carbonate	GP Railcar	No	<0.05	<0.05	100.09	No	No
Calcium Hydrogen Sulfide	GP Railcar	No	<0.05	<0.05		No	No
Capalactone Polymer	GP Railcar	No	<0.05	<0.05		No	No
Caprolactum	GP Railcar	No	<0.05	<0.05	113.1	No	No
Caprylic Acid	GP Railcar	No	<0.05	<0.05	144.2	No	No
Carbon Black Dispersion	GP Railcar	No	<0.05	<0.05		No	No
Carbon Black Oil Petroleum	GP Railcar	No	<0.05	<0.05		No	No
Caster Oil	GP Railcar	No	<0.05	<0.05		No	No
Caustic Alkali	GP Railcar	No	<0.05	<0.05		No	No
Chlorine	Pressure Railcar	Yes			70.91	Yes	No
Chloral Anhydrous	GP Railcar	No	<0.05	<0.05		No	No
Choral Anhydrous inhibited	GP Railcar	No	<0.05	<0.05		No	No
Clarified Oil	GP Railcar	No	<0.05	<0.05		No	No
Clay Slurry	GP Railcar	No	<0.05	<0.05		No	No
Coal Tar Distillate	GP Railcar	No	<0.05	<0.05		No	No
Coke Cinders	GP Railcar	No	<0.05	<0.05		No	No
Colloidal Silica	GP Railcar	No	<0.05	<0.05	60.08	No	No
Cresol	GP Railcar	No	<0.05	<0.05	108.14	Yes	No
Crude Tall Oil	GP Railcar	No	<0.05	<0.05		No	No
Cumene	GP Railcar	Yes***	0.5	0.2	120	Yes	No
Cumyl phenol	GP Railcar	No	<0.05	<0.05	212.29	No	No
Cyanide	GP Railcar	No	<0.05	<0.05		Yes	No

MATERIAL	TYPE**	TO FLARE	VAPOR PRESSURE @ 90^{O}F (psia)	@ 50^{O}F (psia)	MOLECULAR WEIGHT (lb/lb-mol)	HAP ?	IN RISK ASSESS MENT
Cyclo Pentenone	GP Railcar	No	0.326	0.0892	84.12	No	No
Cyclohexane	GP Railcar	Yes***	2.62	0.93	84.16	No	No
Cyclohexanone	GP Railcar	No	0.127	0.021	98.45	No	No
Cyclopentadiene	GP Railcar	Yes***	10.805	4.7345	66.103	No	No
Cyclopentene	Pressure Railcar	Yes	9.66	3.97	68.12	No	No
Clclopentone	GP Railcar	Yes***	8.1	3.28	70.13	No	No
Decane	GP Railcar	No	<0.05	<0.05	142.285	No	No
Decant Oil	GP Railcar	No	<0.05	<0.05		No	No
Decyl Alcohol	GP Railcar	No	<0.05	<0.05		No	No
Denatured Alcohol	GP Railcar	Yes***	1.35	0.33	60.96	No	No
Detergent Alkylates	GP Railcar	No	<0.05	<0.05		No	No
Detergents	GP Railcar	No	<0.05	<0.05		No	No
Dicalcium Phosphates	GP Railcar	No	<0.05	<0.05		No	No
Dichlorobenzene	GP Railcar	No	0.0643	0.0154	147	Yes	No
Dichlorophenol	GP Railcar	No	<0.05	<0.05	163	No	No
Dicichlorophenoxy Propyonic	GP Railcar	No	<0.05	<0.05	249.1	No	No
Dichloropropane	GP Railcar	No	1.85	0.614	112.99	Yes	No
Dichloropropene	GP Railcar	Yes***	1.64	0.562	110.97	No	No
Dicyclopentadiene	GP Railcar	No	0.0832	0.08	132.21	No	No
Diesel Fuel	GP Railcar	No	<0.05	<0.05	130	No	No
Diethanolamine	GP Railcar	No	<0.05	<0.05	105.14	Yes	No
Diethylene Glycol	GP Railcar	No	<0.05	<0.05	106.12	No	No
Diglycerides	GP Railcar	No	<0.05	<0.05		No	No
Diisobuytl Ether	GP Railcar	Yes***	0.915	0.088	130.23	No	No
Diisobutylene	GP Railcar	Yes***	1.125	0.396	112.1	No	No
Diisoctyl Phthlate	GP Railcar	no	<0.05	<0.05		No	No
Dimethyl Acetamide	GP Railcar	No	0.0613	0.0136	87.12	No	No
Dimethyl Amine	Pressure Railcar	Yes***	38	16.6	45.08	No	No
Dimethylbutane (Neohexane)	Pressure Railcar	Yes***	8.06	5	86.177	No	No
Dimethyl Formamide	GP Railcar	No	0.122	<0.05*	73.09	Yes	No
Dimethylene Triamine	GP Railcar	No	<0.05	<0.05	130.17	No	No
Dioctyl Phthlate	GP Railcar	No	<0.05	<0.05		No	No
Diphenyl Oxide	GP Railcar	No	<0.05	<0.05	170.21	No	No
Dipropylene Glycol Methyl Ethe	GP Railcar	No	<0.05	<0.05	134.1	No	No
Disodium Methyl Arsonate (DMA)	GP Railcar	No	<0.05	<0.05		No	No
Dodecyl Mercaptan	GP Railcar	No	<0.05	<0.05	202.4	No	No
Dodecyl Phenol	GP Railcar	No	<0.05	<0.05	246.44	No	No
Dye	GP Railcar	No	<0.05	<0.05		No	No
Emulsions	GP Railcar	No	<0.05	<0.05		No	No
Endosulfan	GP Railcar	No	<0.05	<0.05		No	No
Endrin	GP Railcar	No	<0.05	<0.05	380.9	No	No
Erucic Acid	GP Railcar	No	<0.05	<0.05	338.58	No	No
Ethanol (Ethyl Alcohol)	GP Railcar	Yes***	1.73	0.46	46.069	No	No

MATERIAL	TYPE**	TO FLARE	VAPOR PRESSURE @ 90^{O}F (psia)	@ 50^{O}F (psia)	MOLECULAR WEIGHT (lb/lb-mol)	HAP ?	IN RISK ASSESS MENT
Ethanolamine	GP Railcar	No	<0.05	<0.05	61.08	No	No
Ether	GP Railcar	No	0.18	0.03	130.23	No	No
Ethoxate - by product	GP Railcar	No	<0.05	<0.05	146.14	No	No
Ethyl Acetate	GP Railcar	Yes***	2.54	0.827	88.1	No	No
Ethyl Acrylate	GP Railcar	No	1.05	0.317	100.12	Yes	Yes
Ethyl Hexyl Acrylate	GP Railcar	No	<0.05	<0.05	184.28	No	No
Ethly Hexyl Alcohol	GP Railcar	No	<0.05	<0.05	130.23	No	No
Ethyl Hexyl Nitrate	GP Railcar	No	<0.05	<0.05		No	No
Ethyl Methacrylate	GP Railcar	Yes***	0.573	0.168	114.14	No	No
Ethyl Oxylate	GP Railcar	No	<0.05	<0.05	146.14	No	No
Ethylamine	Pressure Railcar	Yes	26.4	11.1	45.08	No	No
Ethylbenzene	GP Railcar	No	0.278	0.075	106.17	Yes	No
Ethylene	Pressure Railcar	Yes			28.05	No	No
Ethylene Dichloride	GP Railcar	Yes			98.96	Yes	Yes
Ethylene Glycol	GP Railcar	No	<0.05	<0.05	62.068	Yes	No
Ethyloxyethanol	GP Railcar	No	0.164	0.0352	90.12	No	No
Fatty Acid	GP Railcar	No	<0.05	<0.05		No	No
Fatty Alcohol	GP Railcar	No	<0.05	<0.05		No	No
Fatty Amine	GP Railcar	No	<0.05	<0.05		No	No
Flex Gel	GP Railcar	No	<0.05	<0.05		No	No
Fluid Siloxane Cyclopolydimethyl	GP Railcar	No	<0.05	<0.05		No	No
Formaldehyde in Solution	GP Railcar	Yes	0.75	0.5	30.03	Yes	Yes
Formalin	GP Railcar	No	<0.05	<0.05	121.14	No	No
Fuel Oil	GP Railcar	No	<0.05	<0.05		****	****
Fulatex Polymer	GP Railcar	No	<0.05	<0.05		No	No
Gas Oil	GP Railcar	No	<0.05	<0.05	50	****	****
Gasoline	GP Railcar	Yes***	5	2.5	68	No	No
Glue (adhesives)	GP Railcar	No	<0.05	<0.05		No	No
Glutaraldehyde	GP Railcar	No	0.161	0.1	80.09	No	No
Glycerine	GP Railcar	No	<0.05	<0.05	92.09	No	No
Glycol	GP Railcar	No	<0.05	<0.05	62.068	No	No
Glycol Ether	GP Railcar	No	<0.05	<0.05	106.1	Yes	No
Glyconic Acid	GP Railcar	No	<0.05	<0.05	196.2	No	No
Gum Terpentine	GP Railcar	No	<0.05	<0.05		No	No
Heating Oil	GP Railcar	No	<0.05	<0.05		****	No
Heptane	GP Railcar	Yes***	1.25	0.395	100.2	No	No
Hexamethylene Diamine	GP Railcar	No	<0.05	<0.05	116.2	No	No
Hexane	GP Railcar	Yes	4	1.48	86.18	Yes	Yes
Hexanediol	GP Railcar	No	<0.05	<0.05	118.18	No	No
Hexanol	GP Railcar	No	<0.05	<0.05		No	No
Hydrochloric Acid (aqueous)	GP Railcar	No	<0.05	<0.05	36.46	Yes	No
Ink	GP Railcar	No	<0.05	<0.05		No	No
Inorganic Salts	GP Railcar	No	<0.05	<0.05		No	No
Inorganic Solids	GP Railcar	No	<0.05	<0.05		No	No
Iron Oxide	GP Railcar	No	<0.05	<0.05		No	No

MATERIAL	TYPE**	TO FLARE	VAPOR PRESSURE @ 90^{O}F (psia)	@ 50^{O}F (psia)	MOLECULAR WEIGHT (lb/lb-mol)	HAP ?	IN RISK ASSESS MENT
Isobutane (Trimethylmethane)	Pressure Railcar	Yes	72.81	26.7	58.12	No	No
Isobutanol	GP Railcar	No	0.337	0.1	74.12	No	No
Isobutyl Acrylate	GP Railcar	No	0.209	<0.05	128.17	No	No
Isobutylene (isobutene)	Pressure Railcar	Yes	63.81	22.511	56.1	No	No
Isooctanoic Acid	GP Railcar	No	<0.05	<0.05	144.22	No	No
Isoprene (3-Methyl-1,3-Butadiene)	Pressure Railcar	Yes	16.68	4.67	68.118	No	No
Isopropyl Alcohol	GP Railcar	Yes***	1.35	0.33	60.096	****	No
Jet Ruel	GP Railcar	Yes***	4	2	80	****	No
Kerosene	GP Railcar	No	<0.05	<0.05	130	No	No
Latex	GP Railcar	No	<0.05	<0.05		No	No
Lignin Liquor	GP Railcar	No	<0.05	<0.05		No	No
Lime	GP Railcar	No	<0.05	<0.05	136.23	No	No
Linseed Oil	GP Railcar	No	<0.05	<0.05		No	No
Liquid Plastic	GP Railcar	No	<0.05	<0.05		No	No
Liquidied Petroleum Gas	Pressure Railcar	Yes			44.09	No	No
Magnesium	GP Railcar	No	<0.05	<0.05		No	No
Magnesium Bisulfate	GP Railcar	No	<0.05	<0.05		No	No
Magnesium Bisulfite	GP Railcar	No	<0.05	<0.05		No	No
Magnesium Chloride	GP Railcar	No	<0.05	<0.05		No	No
Magnesium Compounds	GP Railcar	No	<0.05	<0.05		No	No
Magnesium Diphenyl	GP Railcar	No	<0.05	<0.05		No	No
Magnesium Sulfonate	GP Railcar	No	<0.05	<0.05		No	No
Malathion	GP Railcar	No	<0.05	<0.05	330.363	No	No
Maleic Anhydride	GP Railcar	No	<0.05	<0.05	98.06	Yes	No
Mercaptoethanol	GP Railcar	No	<0.05	<0.05		No	No
Metallic Salts	GP Railcar	No	<0.05	<0.05		No	No
Methanol	GP Railcar	Yes	3.53	1.06	32.04	Yes	No
Methanol Chloride	GP Railcar	No	0.214	0.05	80.514	No	No
Methoxyl Propanol	GP Railcar	No	<0.05	0.006	76.04	No	No
Methyl Acetate	GP Railcar	Yes***	5.67	2.04	74.08	No	No
Methyl Acrylate	GP Railcar	Yes***	2.35	0.79	86.09	No	No
Methyl Acrylic Acid	GP Railcar	No	<0.05	<0.05	86.09	No	No
Methyl Amine	GP Railcar	Yes	65.5	29.4	31.06	No	No
Methyl Butene	GP Railcar	Yes	22.2	10.2	70.13	No	No
Methyl Chloride	Pressure Railcar	Yes			50.487	Yes	No
Methyl Chloroform	Pressure Railcar	Yes	3.27	1.18	133.4	Yes	Yes
Methyl Ethyl Ketone (MEK)	Pressure Railcar	Yes	2.49	0.84	72.107	Yes	Yes
Methyl Isobutyl Ketone	GP Railcar	Yes***	0.57	0.155	100.16	Yes	No
Methyl Methacrylate Monomer	GP Railcar	Yes	1.04	0.307	100.1	Yes	Yes
Methyl Phenol	GP Railcar	No	0.11	0.1*	118.178	No	No
Methyl Piperidine	GP Railcar	No	0.328	0.0876	93.12	No	No
Methyl-Tert-Butyl Ether	GP Railcar	Yes	6.47	1.92	88.15	Yes	Yes

MATERIAL	TYPE**	TO FLARE	VAPOR PRESSURE @ 90^{O}F (psia)	@ 50^{O}F (psia)	MOLECULAR WEIGHT (lb/lb-mol)	HAP ?	IN RISK ASSESS MENT
Mineral Oil	GP Railcar	No	<0.05	<0.05	130	No	No
Mineral Spirits	GP Railcar	No	<0.05	<0.05	130	No	No
Motor Oil	GP Railcar	No	<0.05	<0.05	50	****	No
Muliatic Acid	GP Railcar	No	<0.05	<0.05	130	No	No
Naphtha (Petroleum Ether)	GP Railcar	No	<0.05	<0.05		****	No
Naphthalene	GP Railcar	No	<0.05	<0.05	132.21	Yes	No
Naphthenic acid	GP Railcar	No	<0.05	<0.05		No	No
Naphtol 50%	GP Railcar	No	<0.05	<0.05	144.19	No	No
Natural gas	Pressure Railcar	Yes				No	No
Nitric acid (aqueous)	GP Railcar	No	<0.05	<0.05	63.1	No	No
Nitrogen	GP Railcar	No	N/A	N/A		No	No
Nitrophenols	GP Railcar	No	<0.05	<0.05	139.1	Yes	No
Nonene (Nonylene)	GP Railcar	Yes***	0.0261	0.22	126.24	No	No
Nonyl Phenol	GP Railcar	No	<0.05	<0.05	220.35	No	No
Octanoic Acid	GP Railcar	No	<0.05	<0.05	144.2	No	No
Octyl Phenol	GP Railcar	No	<0.05	<0.05		No	No
Oil Petroleum (Heavy)	GP Railcar	No	<0.05	<0.05		****	No
Oleic Acid	GP Railcar	No	<0.05	<0.05	282.47	No	No
Paint Plasticizer	GP Railcar	No	<0.05	<0.05		No	No
Palmitic Acid	GP Railcar	No	<0.05	<0.05	256.43	No	No
Paraffin	GP Railcar	No	<0.05	<0.05		No	No
Paraffin Oil	GP Railcar	No	<0.05	<0.05		No	No
Paranox (Lube oil additives)	GP Railcar	No	0.3	0.1	130	No	No
Pentachloraphenol	GP Railcar	No	<0.05	<0.05	266.34	Yes	No
Pentaerythritol Tetraacetate	GP Railcar	No	<0.05	<0.05	304.3	No	No
Pentene	Pressure Railcar	Yes	12.73	5.38	70.134	No	No
Petrolatum (Mineral wax)	GP Railcar	No	<0.05	<0.05		No	No
Petroleum Coke	GP Railcar	No	<0.05	<0.05		No	No
Petroleum Crude Oil	GP Railcar	No	<0.05	<0.05		****	No
Petroleum Distillate	GP Railcar	No	<0.05	<0.05		****	No
Petroleum Solvent	GP Railcar	Yes***	0.79	0.241	92.13	****	No
Phenolic Resin	GP Railcar	No	<0.05	<0.05		No	No
Phenols	GP Railcar	No	<0.05	<0.05	94.11	Yes	No
Phosphoric Acid	GP Railcar	No	<0.05	<0.05	98	No	No
Phosphoric Trichloride	GP Railcar	Yes***	3.15	1.16	137.33	No	No
Phthalic Acid	GP Railcar	No	<0.05	<0.05	166.13	No	No
Phthalic Anhydride	GP Railcar	No	<0.05	<0.05	148.12	Yes	No
Picoline (turpene)	GP Railcar	No	0.33	0.085	93.12	No	No
Pine Oil	GP Railcar	No	<0.05	<0.05		No	No
Pinene	GP Railcar	No	0.138	0.037	136.24	No	No
Pitch	GP Railcar	No	<0.05	<0.05		No	No
Plastic Pellets	GP Railcar	No	<0.05	<0.05		No	No

MATERIAL	TYPE**	TO FLARE	VAPOR PRESSURE @ 90^{O}F (psia)	@ 50^{O}F (psia)	MOLECULAR WEIGHT (lb/lb-mol)	HAP ?	IN RISK ASSESS MENT
Plasticizer	GP Railcar	No	<0.05	<0.05		No	No
Polybutene (Polybutylene)	GP Railcar	No	<0.05	<0.05		No	No
Polybutene Oil	GP Railcar	No	<0.05	<0.05		No	No
Polyethylene	GP Railcar	No	<0.05	<0.05		No	No
Polylite	GP Railcar	No	<0.05	<0.05		No	No
Polymers	GP Railcar	No	<0.05	<0.05		No	No
Polypropylene	GP Railcar	No	<0.05	<0.05		No	No
Polypropylene Glycol	GP Railcar	No	<0.05	<0.05		No	No
Polystrene	GP Railcar	No	<0.05	<0.05		No	No
Polytex	GP Railcar	No	<0.05	<0.05		No	No
Polyvinyl Acetate (PVAC)	GP Railcar	No	<0.05	<0.05		No	No
Potash	GP Railcar	No	<0.05	<0.05		No	No
Potassium Bisulfite	GP Railcar	No	<0.05	<0.05		No	No
Potassium Chlorate	GP Railcar	No	<0.05	<0.05		No	No
Potassium Salt of Modified Resin-rexol	GP Railcar	No	<0.05	<0.05		No	No
Potassium Thiosulfate	GP Railcar	No	<0.05	<0.05		No	No
Potassium Trisulfate	GP Railcar	No	<0.05	<0.05		No	No
Propane	Pressure Railcar	Yes	188.41	78.54	44.09	No	No
Propane Diamine	GP Railcar	No	0.335	0.054	74.126	No	No
Propionic Acid	GP Railcar	No	0.114	<0.05	74.08	No	No
Propylene	Pressure Railcar	Yes	228.88	97.195	42.081	No	No
Propylene Glycol	GP Railcar	No	<0.05	<0.05	76.1	No	No
Propylene Tetramer (Dodecene)	GP Railcar	No	<0.05	<0.05		No	No
Propylethylene	GP Railcar	No	<0.05	<0.05		No	No
PVC (Poly Vinyl Chloride)	GP Railcar	No	<0.05	<0.05		No	No
Quick Lime	GP Railcar	No	<0.05	<0.05	136.23	No	No
Reclaimed Engine Oil	GP Railcar	No	<0.05	<0.05	50	No	No
Resin Petroleum Naphtha	GP Railcar	No	<0.05	<0.05		No	No
Resin-Polyester	GP Railcar	No	<0.05	<0.05		No	No
Rock Salt	GP Railcar	No	<0.05	<0.05		No	No
Sand	GP Railcar	No	<0.05	<0.05		No	No
Santicizer (Plasticizers Monsanto)	GP Railcar	No	<0.05	<0.05		No	No
Shel Stearin	GP Railcar	No	<0.05	<0.05		No	No
Silicone	GP Railcar	No	<0.05	<0.05		No	No
Silicone Emulsion	GP Railcar	No	<0.05	<0.05		No	No
Silicone Fluid	GP Railcar	No	<0.05	<0.05		No	No
Silicone Polymer	GP Railcar	No	<0.05	<0.05		No	No
Siloxane	GP Railcar	No	<0.05	<0.05		No	No
Slack Wax	GP Railcar	No	<0.05	<0.05		No	No
Slury Oil	GP Railcar	No	<0.05	<0.05		No	No
Soaps	GP Railcar	No	<0.05	<0.05		No	No
Soda Ash (Sodium Carbonate)	GP Railcar	No	<0.05	<0.05		No	No
Sodium	GP Railcar	No	<0.05	<0.05	22.99	No	No
Sodium Bisulfite	GP Railcar	No	<0.05	<0.05		No	No
Sodium Carbonate	GP Railcar	No	<0.05	<0.05		No	No
Sodium Chlorate	GP Railcar	No	<0.05	<0.05		No	No
Sodium Hdrosulfide	GP Railcar	No	<0.05	<0.05		No	No

MATERIAL	TYPE**	TO FLARE	VAPOR PRESSURE @ 90^{O}F (psia)	@ 50^{O}F (psia)	MOLECULAR WEIGHT (lb/lb-mol)	HAP ?	IN RISK ASSESS MENT
Sodium Hydroxide	GP Railcar	No	<0.05	<0.05		No	No
Sodium Lactate	GP Railcar	No	<0.05	<0.05		No	No
Sodium Perborate	GP Railcar	No	<0.05	<0.05		No	No
Sodium Perborate Monohydrate	GP Railcar	No	<0.05	<0.05		No	No
Sodium Phosphate	GP Railcar	No	<0.05	<0.05		No	No
Sodium Sulfate	GP Railcar	No	<0.05	<0.05		No	No
Sodium Tripolyphosphate	GP Railcar	No	<0.05	<0.05		No	No
Sodium Vinyl Sulphonate	GP Railcar	No	<0.05	<0.05		No	No
Solids with vp <0.05 psia	GP Railcar	No	<0.05	<0.05		No	No
Stearic Acid	GP Railcar	No	<0.05	<0.05	284.48	No	No
Stearin	GP Railcar	No	<0.05	<0.05		No	No
Steryl Alcohol	GP Railcar	No	<0.05	<0.05		No	No
Stephanate Soaps	GP Railcar	No	<0.05	<0.05		No	No
Styrene	GP Railcar	Yes	0.181	0.045	104.14	Yes	Yes
Styrene Resin Solution	GP Railcar	No	<0.05	<0.05		No	No
Sulfite Stabilizer Solution	GP Railcar	No	<0.05	<0.05		No	No
Sulfonic Acid	GP Railcar	No	<0.05	<0.05	110.13	No	No
Sulfur	GP Railcar	No	<0.05	<0.05		No	No
Sulfuric Acid	GP Railcar	No	<0.05	<0.05		No	No
Surfactants (Surface Active agent)	GP Railcar	No	<0.05	<0.05		No	No
Synthetic Isopharaffinic	GP Railcar	No	<0.05	<0.05		No	No
Synthetic Rubber	GP Railcar	No	<0.05	<0.05		No	No
Synthetic Rubber latex	GP Railcar	No	<0.05	<0.05		No	No
Talc - Magnesium Silicate	GP Railcar	No	<0.05	<0.05		No	No
Tall Oil (Adietic/Oleic acids)	GP Railcar	No	<0.05	<0.05		No	No
Tall Oil Resin	GP Railcar	No	<0.05	<0.05		No	No
Tallows	GP Railcar	No	<0.05	<0.05		No	No
Terephthalic Acid (TPA)	GP Railcar	No	<0.05	<0.05		No	No
Terpenes	GP Railcar	No	<0.05	<0.05	136.2	No	No
Tetrahydrofuran	GP Railcar	Yes***	4.25	1.56	72.11	No	No
Tetrabutylurea	GP Railcar	No	<0.05	<0.05		No	No
Tetraethylene Glycol	GP Railcar	No	<0.05	<0.05	194.2	No	No
Tetraethylene Pentamine	GP Railcar	No	<0.05	<0.05	189.3	No	No
Textile	GP Railcar	No	<0.05	<0.05		No	No
Therminol	GP Railcar	No	<0.05	<0.05		No	No
Tolan	GP Railcar	No	<0.05	<0.05		No	No
Toluene (Toluol)	GP Railcar	Yes	0.79	0.241	92.13	Yes	Yes
Toluene Solphonic Acid	GP Railcar	No	<0.05	<0.05	122.17	No	No
Toluidine	GP Railcar	No	<0.05	<0.05	107.2	Yes	No
Triacetin	GP Railcar	No	<0.05	<0.05	178.23	No	No
Trichlorobenzene	GP Railcar	No	<0.05	<0.05	181.45	Yes	No
Triethylene Glycol	GP Railcar	No	<0.05	<0.05	15018	No	No
Triethylene Tetramine	GP Railcar	No	<0.05	<0.05	146.24	No	No
Trimethyl Phosphite	GP Railcar	No	<0.05	<0.05	182.156	No	No
Trimethylamine	Pressure Railcar	Yes	39.1	18.9	59.11	No	No
Tripropylene Glycol Monoethyl Ether	GP Railcar	No	<0.05	<0.05	148.2	No	No
Turpentine	GP Railcar	No	<0.05	<0.05		No	No
Urea	GP Railcar	No	<0.05	<0.05		No	No

MATERIAL	TYPE**	TO FLARE	VAPOR PRESSURE @ 90^{O}F (psia)	@ 50^{O}F (psia)	MOLECULAR WEIGHT (lb/lb-mol)	HAP ?	IN RISK ASSESS MENT
Urea Nitrate	GP Railcar	No	<0.05	<0.05		No	No
Used Oils	GP Railcar	No	<0.05	<0.05		No	No
Varnish	GP Railcar	No	<0.05	<0.05		No	No
Vinyl Acetate	GP Railcar	Yes	3.06	1.03	86.09	Yes	Yes
Vinyl Toluene	GP Railcar	No	0.104	0.1	118.2	No	No
Waste Petroleum Fuel Oil	GP Railcar	No	<0.05	<0.05		No	No
Waste Water	GP Railcar	No	<0.05	<0.05		No	No
Wax	GP Railcar	No	<0.05	<0.05		No	No
Xylene	GP Railcar	Yes	0.244	0.0649	106.14	Yes	Yes
Xylene Naphthlene	GP Railcar	No	<0.05	<0.05		No	No
Zinc Bisulfite	GP Railcar	No	<0.05	<0.05		No	No

* Estimated

** For Solid materials, hopper cars may be used instead of the GP railcars

*** If the GP railcar is not equipped to vent to the flare and the railcar's vapor space contains less than 10% risk assessment materials, it may be vented to the atmosphere, and the resulting emissions will be limited to a total of 25 tons/yr.

**** May contain HAP or risk assessment material